

Additional file 8

Characteristics of the 1% of the rare 6-mers in the genome of *Microcystis aeruginosa* PCC 7806

6-mers	occurrence	Palindrome	Enzyme	Organism	6-mers	occurrence	Palindrome	Enzyme	Organism
ACATGC	15	no			GCATGC	39	yes	<i>SphI</i>	<i>Streptomyces</i>
GTGCAC	17	yes	<i>ApaLI</i>	<i>Acetobacter</i>	TACGTG	44	no		
CGTACG	18	yes	<i>BsiW</i>	<i>Bacillus</i>	ATGCAT	45	yes	<i>AvaIII</i>	<i>Anabaena</i>
ACATGT	18	yes	<i>PciI</i>	<i>Planococcus</i>	GTGCCC	45	no		
GCAATG	21	no			GAGCAC	47	no		
GACGTC	23	yes	<i>AatII</i>	<i>Acetobacter</i>	GTCTAC	50	no		
ACGTGT	28	no			TTCGAA	55	yes	<i>BstBI</i>	<i>Bacillus</i>
GTCGAC	30	yes	<i>Sall</i>	<i>Streptomyces</i>	GGGCTC	58	no		
CACGTG	30	yes	<i>PmiI</i>	<i>Pseudomonas</i>	GAGCCC	61	no		
ACACGT	31	no			TGCGCA	64	yes	<i>FspI</i>	<i>Fischerella</i>
GGGCAC	31	no			GGTACC	93	yes	<i>Acc65I</i>	<i>Acinetobacter</i>
TACGTA	32	yes	<i>SnaBI</i>	<i>Sphaerotilus</i>	AGTACT	96	yes	<i>Scal</i>	<i>Streptomyces</i>
GCTAGC	33	yes	<i>BmtI</i>	<i>Bacillus</i>	CATATG	97	yes	<i>NdeI</i>	<i>Neisseria</i>
CACGTA	34	no			ACGCGT	98	yes	<i>MluI</i>	<i>Micrococcus</i>
GTGCTC	35	no			CTCGAG	122	yes	<i>AvaI</i>	<i>Anabaena</i>
GTAGAC	36	no			CGCGCG	129	yes	none	
GTATAC	36	yes	<i>BstZ17I</i>	<i>Bacillus</i>	CATACG	133	no		
GAGCTC	37	yes	<i>SacI</i>	<i>Streptomyces</i>	CGTATG	136	no		
ACTAGT	38	yes	<i>SpeI</i>	<i>Sphaerotilus</i>	GGACCT	147	no		
GGCGTC	38	no			CAGCTC	148	no		
GACGCC	38	no							

Of the 4096 possible 6-mers, 1.5% are palindromic sequences. These sequences seem to be over-represented among the 41 rarest 6-mers in the Mic-PCC7806 genome since 51% of these 6-mers are palindromes. Most of the palindromic sequences correspond to known